Manitoba
Building for the Future

Guidelines For Estimating
Strawberry U-Pick
Production Costs

Manitoba Agriculture and Food - Information Update **www.gov.mb.ca/agriculture/**

Date: March, 2003

The projected strawberry production costs in this publication have been prepared to assist you in developing your own production costs.

The capital and cash input costs associated with growing strawberries in Manitoba are substantial. Detailed planning is necessary when budgeting for capital expenditures and also for the annual operating costs. The importance of good financial planning is evident by noting the capital required for 10 acres of strawberries may be in the vicinity of $124,000. Cash costs of establishing the crop run about $15,000 in the two years prior to picking with an additional $21,000 in the first year of of production before income begins to flow.

The budget should be used as a guide only as each situation may have higher or lower costs than those listed. Costs and yields on each farm differ due to soil type, climatic conditions and agronomic practices. Therefore, producers are encouraged to substitute their own figures in the attached budget to develop their own cost of production for strawberry production.

Disclaimer: This budget is only a guide and is not intended as an in depth study of the cost of production of the Manitoba Strawberry U-Pick industry. Interpretation and utilization of this information is the responsibility of the user. If you require assistance with developing your individual budget, please contact your local MAF Farm Management Specialist or Regional Crop Specialist.

Commercial strawberry production in Manitoba has been an important part of diversification in the province. Currently there are approximately 60 growers of strawberries in the province; these farms vary in size from 3 acres to 20 acres. The majority of the strawberry farms are on a U-Pick basis; but custom picking of the crop has increased over the past few years.

Strawberries are an intensely managed crop that require precise timing. Yield and quality achieved during the short 3-4 week picking season hinge on timely management practices of the previous year, as well as care and maintenance before picking. Growers entering the industry need these basic requirements: (1) suitable land with adequate drainage and shelterbelts, (2) access to an adequate quantity and quality of water for irrigation, (3) financial resources that permit a significant level of investment on infrastructure and input costs, (4) the ability to apply intensive management skills to the crop in a precisely timed manner, (5) the ability to determine market potential, and (5) the willingness to accept risk.

It is advised that new growers should proceed on a small but graduated scale. A complete assessment of the customer base and marketing opportunities needs to be completed prior to planting the first crop of strawberries.

Strawberry U-Pick - Cost of Production Summary March, 2003

A. Operating Costs	Establishment[1] Cost $/acre	Picking Cost /acre	Annual Cost/lb	Your Cost
1.01 Seed & Plants	$815.00	$824.75	$0.2561	
1.02 Fertilizer	$65.40	$56.80	$0.0176	
1.03 Herbicides	$31.00	$20.00	$0.0062	
1.04 Insecticides	$0.00	$36.00	$0.0112	
1.05 Fungicides	$0.00	$45.00	$0.0140	
1.06 Field Fuel Costs	$28.85	$17.66	$0.0055	
1.07 Irrigation Costs	$60.00	$240.00	$0.0745	
1.08 Custom Costs	$0.00	$80.00	$0.0248	
1.09 Repair & Maintenance	$186.72	$373.44	$0.1160	
1.10 Miscellaneous	$190.00	$320.00	$0.0994	
1.11 Land Taxes	$20.00	$10.00	$0.0031	
Subtotal Operating	$1,396.97	$2,023.65	$0.6300	
1.12 Interest on Operating	$41.91	$60.71	$0.0189	
Total Operating Costs	**$1,438.88**	**$2,084.36**	**$0.6489**	
B. Fixed Costs				
2. Depreciation				
2.01 Machinery	$1,124.64	$562.32	$0.1746	
2.02 Storage	$585.00	$292.50	$0.0908	
3. Investment				
3.01 Land	$120.00	$60.00	$0.0186	
3.02 Machinery	$274.91	$137.46	$0.0427	
3.03 Storage	$200.20	$100.10	$0.0311	
Total Fixed Costs	**$2,304.75**	**$1,152.38**	**$0.3578**	
C. Labour	**$380.10**	**$606.93**	**$0.1885**	
Total Cost of Production	**$4,123.73**	**$3,843.67**	**$1.1952**	

1. The cost of establishing the crop of $4,123.73 per acre, includes the pre plant and planting years, was spread over 5 years at $824.75 per year.

Disclaimer: This budget is only a guide and is not intended as an in depth study of the cost of production of the Manitoba Strawberry U-Pick industry.

Manitoba Agriculture and Food
Farm Management

Strawberry U-Pick Assumptions

Number of acres in production	**10**
Additional land (acres)for parking etc.	**1**
Market Value ($/acre)	**$1,500**
Land Taxes ($/acre)	**$10.00**
Fuel Price (Diesel $/litre)	**$0.52**
Interest on Operating	**6.0%**
Interest on Investment	**4.0%**

Crop Rotation and Yields

	Year	lbs/acre
Pre Plant	1	**0**
Planting Year	2	**0**
1st Picking	3	**6600**
2nd Picking	4	**5500**
3rd Picking	5	**4000**
	Total Yield (lbs/acre)	**16,100**
	Average Yield (lbs/acre)	**3,220**

Capital Costs		Market Value	Allocated % Strawberry	Allocated $ Strawberry
Land Value				
Land Cost		**$16,500**	**100%**	**$16,500**
Machinery Costs				
Tractor	**30 hp**	**$30,000**	**100%**	**$30,000**
Tractor	**100 hp**	**$45,000**	**33%**	**$14,850**
Planter	**5 ft**	**$2,000**	**100%**	**$2,000**
Plow	**5 ft**	**$100**	**100%**	**$100**
Sprayer	**25 ft**	**$8,000**	**100%**	**$8,000**
Rotovator	**5 ft**	**$2,200**	**90%**	**$1,980**
Cultivator	**18 ft**	**$500**	**90%**	**$450**
Straw spreader	**5 ft**	**$14,000**	**25%**	**$3,500**
Mower	**5 ft**	**$2,000**	**75%**	**$1,500**
Seeder Discer	**15 ft**	**$100**	**100%**	**$100**
Total		**$103,900**		**$62,480**
Other Costs				
Storage Shed		**$15,000**	**90%**	**$13,500**
Cooler		**$2,000**	**100%**	**$2,000**
Booth		**$1,500**	**100%**	**$1,500**
Miscellaneous		**$10,000**	**35%**	**$3,500**
Irrigation Equipment		**$25,000**	**100%**	**$25,000**
Total		**$53,500**		**$45,500**
Total Investment		**$173,900**		**$124,480**

Strawberry U-Pick Cost of Production Worksheet
Establish - Pre Plant & Planting Year Details

				Your Cost
1.01 Seed & Plants				
Cover Crop		1.5	seeding rate (bu/acre)	
Sorghum	x	$10.00	seed cost ($/bu)	
	=	$15.00	$/acre	
Plants		8,000	plants/acre	
	x	$100.00	$/ 1,000 plants	
	÷	1,000	1,000 plants	
	=	$800.00	$ /acre	
Total Cost		**$815.00**	**$ /acre**	
1.02 Fertilizer				
Nitrogen				
Pre Plant		0	lbs/acre seeding	
Plant	+	70	lbs/acre seeding	
	x	$0.270	cost/lb	
	=	$18.90	$ /acre	
P_2O_5				
Pre Plant		0	lbs/acre seeding	
Plant		100	lbs/acre seeding	
	x	$0.280	cost/lb	
	=	$28.00	$ /acre	
K_2O				
Pre Plant		0	lbs/acre seeding	
Plant		30	lbs/acre seeding	
	x	$0.135	cost/lb	
	=	$4.05	$ /acre	
Sulfur				
Pre Plant		0	lbs/acre seeding	
Plant		15		
	x	$0.230	cost/lb seeding	
	=	$3.45	$ /acre	
Zinc				
Pre Plant		0	lbs/acre seeding	
Plant		6		
	x	$1.500	cost/lb seeding	
	=	$9.00	$ /acre	

				Your Cost
Applicator rental				
Pre Plant	=	$1.00	$/acre	_____
Plant	=	$1.00	$/acre	_____
Total	=	$2.00	$/acre	_____
Total	**=**	**$65.40**	**$/acre**	_____
1.03 Herbicides				
Pre Plant		$0.00	broadleaf control (establish)	_____
	+	$10.00	wildoats (establish)	_____
	+	$1.00	other	_____
	=	$11.00	$ /acre	_____
Planting				
		$20.00	broadleaf control	_____
	+	$0.00	wildoats	_____
	+	$0.00	other	_____
	=	$20.00	$ /acre	_____
Total	**=**	**$31.00**	**$ /acre**	_____
1.04 Insecticides				
Pre Plant		$0.00	insect 1	_____
	+	$0.00	insect 2	_____
	+	$0.00	insect 3	_____
	=	**$0.00**	$ /acre	_____
Planting		$0.00	insect 1	_____
	+	$0.00	insect 2	_____
	+	$0.00	insect 3	_____
	=	**$0.00**	$ /acre	_____
Total	**=**	**$0.00**	$ /acre	_____
1.05 Fungicides				
Pre Plant		$0.00	spray 1	_____
	+	$0.00	spray 2	_____
	+	$0.00	spray 3	_____
	=	$0.00	$/acre	_____

				Your Cost
Planting		$0.00	spray 1	
	+	$0.00	spray 2	
	+	$0.00	spray 3	
	=	$0.00	$/acre	
Total	**=**	**$0.00**	**$/acre**	

1.06 Field Fuel Costs

Field Operations

Pre Plant

Operation	Times Over	Width feet	Speed mph	Fuel $/ac.	
Cultivate	1	18	5	$1.37	
Seed	1	15	6	$1.37	
Plow down	1	5	5	$4.91	
Cultivate	1	18	5	$1.37	
Fertilizer	1	40	7	$0.44	
Total				**$9.45**	

Field Operations

Planting

Operation	Times Over	Width feet	Speed mph	Fuel $/ac.	
Planting	1	5	1	$5.85	
Cultivate	3	5	5	$3.51	
Spray	1	25	4	$0.29	
Straw Spreading	1	5	2	$9.75	
Total				**$19.40**	

Total Field Operation Fuel Costs **$28.85**

1.07 Irrigation Fuel Costs

Pre Plant		0	inches of water applied	
	x	4	hours/acre for 1" of water	
	x	$5.00	rate/hour	
	=	$0.00	$/acre	

				Your Cost
Plant		3	inches of water applied	
	x	4	hours/acre for 1" of water	
	x	$5.00	rate/hour	
	=	$60.00	$/acre	
Total	=	**$60.00**	**$/acre**	

1.08 Custom Costs

Pre Plant		$0.00	total cost	
Plant		$0.00	total cost	
	÷	10	acres	
	=	**$0.00**	**$/acre**	

1.09 Repairs and Maintanence

		1.5%	percentage rate	
	x	$12,448	investment/acre	
		$186.72	**$ /acre**	

1.10 Miscellaneous

		$200.00	pre plant $/acre	
	+	$500.00	plant $/acre	
	÷	10	acres	
	=	**$70.00**	**$/acre**	
Straw Costs		10	bales/acre	
	x	$12.00	$/bale	
	=	**$120.00**	**$/acre**	

1.11 Land Taxes

		$10.00	pre plant $/acre	
	+	$10.00	plant $/acre	
	=	**$20.00**	**$ /acre**	

1.12 Interest on Operating

		$1,396.97	subtotal operating	
	÷	2	average	
	x	6.0%	interest rate	
	=	**$41.91**	**$ /acre**	

			Your Cost
2. Depreciation	**Original Value - Salvage Value / Useful Life**		
2.01 Machinery			
	$6,248.00	cost/acre	
-	$624.80	salvage value	
x	2	years	
÷	10	useful life	
=	**$1,124.64**	**$ /acre**	
2.02 Other Equipment			
	$4,550.00	cost/acre	
-	$455.00	salvage value	
x	2	years	
÷	14	useful life	
=	**$585.00**	**$ /acre**	
3. Investment	**(Original Value + Salvage Value) / 2 x Investment Rate**		
3.01 Land			
	$1,500.00	cost/acre	
x	2	years	
x	4.0%	% investment rate	
=	**$120.00**	**$ /acre**	
3.02 Machinery			
	$6,248.00	cost/acre	
+	$624.80	salvage value	
÷	2	average	
x	2	years	
x	4.0%	% investment rate	
=	**$274.91**	**$ /acre**	

			Your Cost
3.03 Other Equipment			
	$4,550.00	cost/acre	
+	$455.00	salvage value	
÷	2	average	
x	2	years	
x	4.0%	% investment rate	
=	**$200.20**	**$ /acre**	
Labour			
	30.0	hrs/ac weed control	
+	8.0	hrs/ac de-blossom	
+	6.0	hrs/ac straw spreading	
+	6.0	hrs/ac irrigation	
+	4.3	hrs/ac field operations	
x	$7.00	$/hour	
=	**$380.10**	**$ /acre**	

Strawberry U-Pick Cost of Production Worksheet
Picking Years - Details

				Your Cost
A. Operating Costs				
1.01 Seed and Planting Costs				
		$4,123.73	pre plant & planting	
	÷	5	years in crop	
	=	**$824.75**	**$/acre**	
1.02 Fertilizer				
Nitrogen		150	lbs/acre cropping	
	x	$0.270	cost/lb cropping	
	=	$40.50	$ /acre	
P_2O_5		20	lbs/acre cropping	
	x	$0.280	cost/lb cropping	
	=	$5.60	$ /acre	
K_2O	+	30	lbs/acre cropping	
	x	$0.135	cost/lb cropping	
	=	$4.05	$ /acre	
Sulfur		5	lbs/acre cropping	
	x	$0.230	cost/lb cropping	
	=	$1.15	$ /acre	
Zinc		3	lbs/acre cropping	
	x	$1.500	cost/lb cropping	
	=	$4.50	$ /acre	
Applicator rental	=	$1.00	$ /acre	
Annual Cost	=	**$56.80**	**$ /acre**	
1.03 Herbicides				
		$20.00	$ /acre broadleaf	
	+	$0.00	$ /acre wild oats	
	=	**$20.00**	**$ /acre**	

				Your Cost
1.04 Insecticides				
		$24.00	$ /acre Tarnish Plant Bug	
	+	$12.00	$ /acre Mites	
	=	**$36.00**	**$ /acre**	
1.05 Fungicide				
		$20.00	$ /acre	
	+	$25.00	$ /acre	
	=	**$45.00**	**$ /acre**	

1.06 Field Fuel Costs

Operation	Times Over	Width feet	Speed mph	Fuel $/ac.	Your Cost
Straw removal	1	5	5	$1.17	
Spray	5	25	4	$1.46	
Mowing	1	5	5	$1.17	
Rototilling	2	5	3	$3.90	
Fertilizer	2	40	7	$0.21	
Straw Spreading	1	5	2	$9.75	
				$17.66	

				Your Cost
1.07 Irrigation Costs				
		12	inches of water applied	
	x	4	hours/acre for 1" of water	
	x	$5.00	rate/hour	
	=	**$240.00**	**$/acre**	
1.08 Custom Operations				
		$800.00	**$ /acre**	
	÷	10	acres	
	=	**$80.00**	**$/acre**	
1.09 Repair & Maintenance				
		3.0%	percentage rate	
	x	$12,448	investment/acre	
	=	**$373.44**	**$ /acre**	

			Your Cost
1.10 Miscellaneous			
	$2,000.00	$ /acre	
÷	10	acres	
=	**$200.00**	**$/acre**	
Straw Costs	10	bales/acre	
x	$12.00	$/bale	
=	**$120.00**	**$/acre**	
1.11 Land Taxes			
=	**$10.00**	**$ /acre**	
1.12 Interest on Operating			
	$2,023.65	subtotal operating	
÷	2	average	
x	6.0%	interest rate	
=	**$60.71**	**$ /acre**	

Your Cost

B. Fixed Costs

2. Depreciation $\frac{\text{Original Value - Salvage Value}}{\text{Useful Life}}$

2.01 Machinery

	$6,248.00	cost/acre	_____
-	$624.80	salvage value	_____
÷	10	useful life	_____
=	**$562.32**	**$ /acre**	_____

2.02 Other Equipment

	$4,550.00	cost/acre	_____
-	$455.00	salvage value	_____
÷	14	useful life	_____
=	**$292.50**	**$ /acre**	_____

3. Investment $\frac{\text{Original Value + Salvage Value}}{2}$ **x Investment Rate**

3.01 Land

	$1,500.00	cost/acre	_____
x	4.0%	% investment rate	_____
=	**$60.00**	**$ /acre**	_____

3.02 Machinery

	$6,248.00	cost/acre	_____
+	$624.80	salvage value	_____
÷	2	average	_____
x	4.0%	% investment rate	_____
=	**$137.46**	**$ /acre**	_____

3.03 Other Equipment

	$4,550.00	cost/acre	_____
+	$455.00	salvage value	_____
÷	2	average	_____
x	4.0%	% investment rate	_____
=	**$100.10**	**$ /acre**	_____

			Your Cost
C. Labour			
	30.0	hrs/ac weed control	_____
+	0.0	hrs/ac de-blossoming	_____
+	5.0	hrs/ac straw spreading	_____
+	6.0	hrs/ac irrigation	_____
+	3.7	hrs/ac field operations	_____
+	42.0	hrs/ac u-pick operations	_____
x	$7.00	$/hour	_____
=	**$606.93**	**$ /acre**	_____

For more information contact your local Manitoba Agriculture and Food office.

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